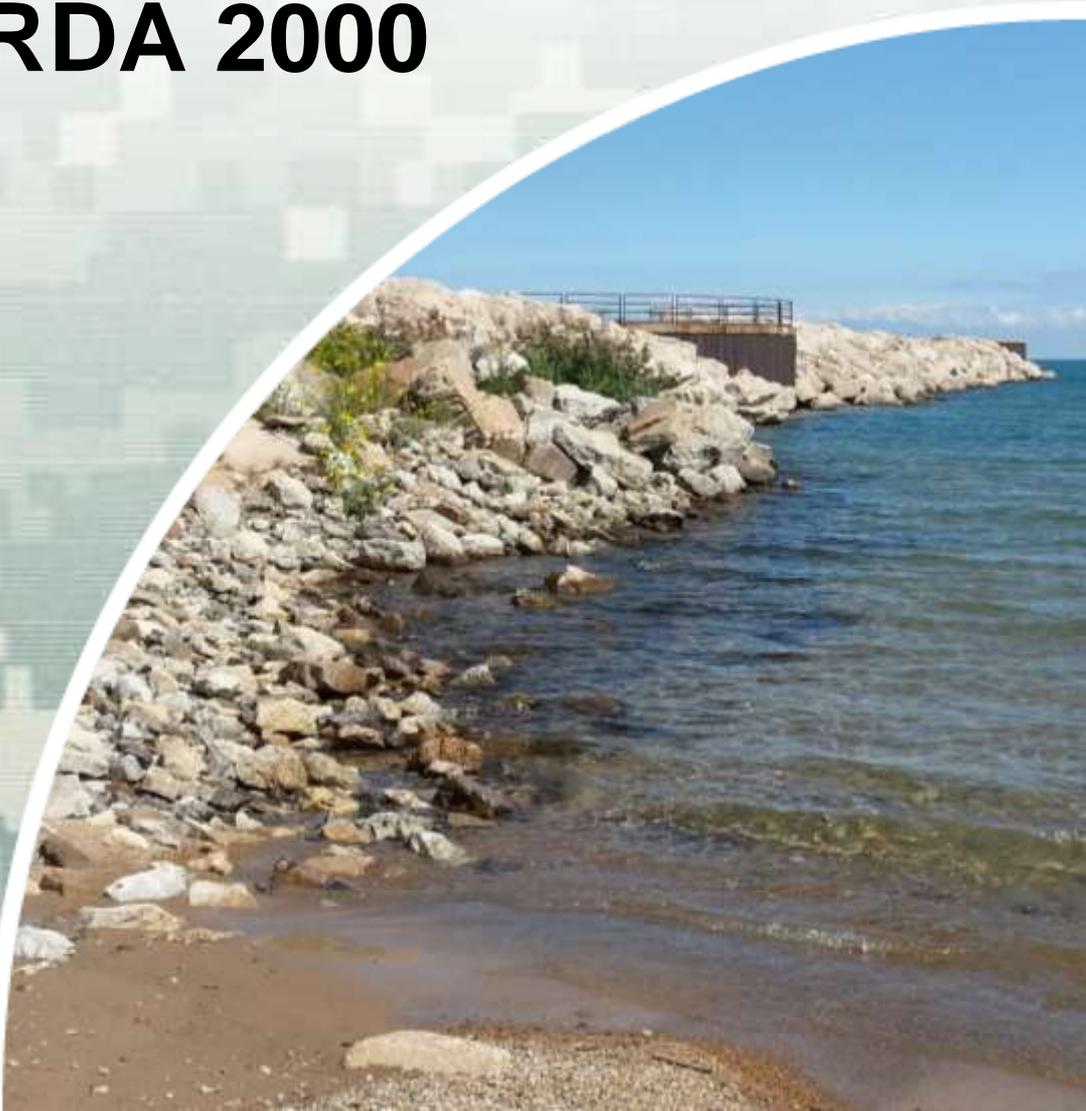


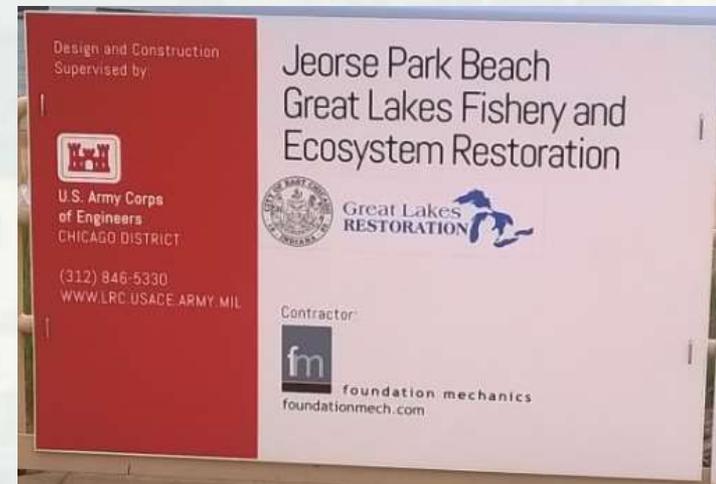
Jeorse Park Beach Ecosystem Restoration Section 506 of WRDA 2000

USACE, Chicago District
January 2019



Outline

- Background
- Sec 506 Restoration Project Map
- Contract Award
- 2017-2018 Status Updates
- Monitoring Plan



Background

- ❑ USACE is working with the Jeorse Park Taskforce which includes federal, state and local stakeholders brought together to solve degraded ecosystem and poor water quality problems at Jeorse Park Beach
- ❑ City of East Chicago is the local sponsor
- ❑ Ecosystem restoration of beach, dune and lacustrine habitat along 4,500 feet of Lake Michigan covering 14.1 acres



Background

- ❑ Great Lakes Fishery and Ecosystem Restoration (GLFER) Section 506 of Water Resources and Development Act (WRDA) 2000 is the authority
- ❑ Section 506 provides the authority to plan, design, and construct projects that support the restoration of fisheries, ecosystems, and beneficial uses of the Great Lakes
- ❑ Jeorse Park Sec 506 project is funded with USEPA managed Great Lakes Restoration Initiative (GLRI) funds





GLFER Restoration Project Features



Habitat

-  Breakwater Plantings - 5,100 Shrubs & 2,000 Plugs
-  Beach Plants - 1,500 Shrubs & 33,000 Plugs
-  Pine Plantings - 80 White Pine, 25 Jack Pine, 500 Shrubs & 6,000 Plugs
-  Rock Reef - 2 cobble mounds provide 25 acres of fisheries benefits

Date: 6 Sept 2017



1 IN = 328 FT



Contract

- ❑ Contract Awarded to Foundation Mechanics
30 September 2016

- ❑ 5 Year period of performance
 - 1st year: Installation and Earthwork
 - 2nd – 5th years: Establishment

- ❑ Contract Value: \$1,361,958.00



Contract Status – 2017 Actions

- Initial invasive species removal
- Breakwater aggregate and sand planting medium placement:
 - ▶ Cover crop was seeded for winter 2017-18 protection
 - ▶ Safety issue (sink holes) identified – contract mod for railing
- Cobble mound fish reefs were installed 20 July 2017



Representative
cobble material
used in construction
of rock reef habitat



Woody Invasive Species Removal

2016



Removed aggressive native and invasive tree species such as Russian Olive and Cottonwood.

Replaced with White and Jack Pines more suitable for dune habitat.



2017



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Contract Status – 2017 Actions

- ❑ Land-moving and grading activities completed on the dune habitat
- ❑ Seeding native species occurred across pine planting, dune, and beach habitats following sand placement and earth moving



Contract Status – 2018 Actions

- ❑ **Plugs, Shrubs and Trees planted Spring 2018**
 - Propagation issues with several species pushed the planting schedule into the second year of contract
 - Contractor remains responsible for initial performance criteria at end of year 5



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2018



2018



Planting Plan Performance Criteria

Contract Year ending 30 September:

2017

2018

2019

2020

2021

Performance Criteria	Year 1	Year 2	Year 3	Year 4	Year 5
% Invasive species treated within each zone	100%	100%	100%	100%	100%
% Invasive species coverage within each zone	N/A	5%	5%	1%	1%
% of seeded native species coverage	N/A	N/A	50%	60%	70%
% of seeded native species present	N/A	N/A	100%	100%	100%
% of installed plant material alive and viable	N/A	100%**	100%**	100%**	100%**

- Establishment activities will continue through the 5 year contract**
 - Watering
 - Invasive species removal/treatment
 - Native plant replacement as necessary



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Fish Monitoring

28 June 2018 – Two 15 minute Electrofishing runs & One seine haul

- Collected 362 individuals from 9 species
- Yellow Bullhead, Smallmouth Bass, Round Goby*, Pumpkinseed Sunfish, Rock Bass, Shorthead Redhorse, Spottail Shiner, Sand Shiner, and Banded Killifish



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2019-2021 Contract Actions

- Establishment activities will continue per specifications to meet performance criteria
- Installation of guard rail on breakwater expected to be complete early 2019
 - ▶ Includes signage



Monitoring Plan

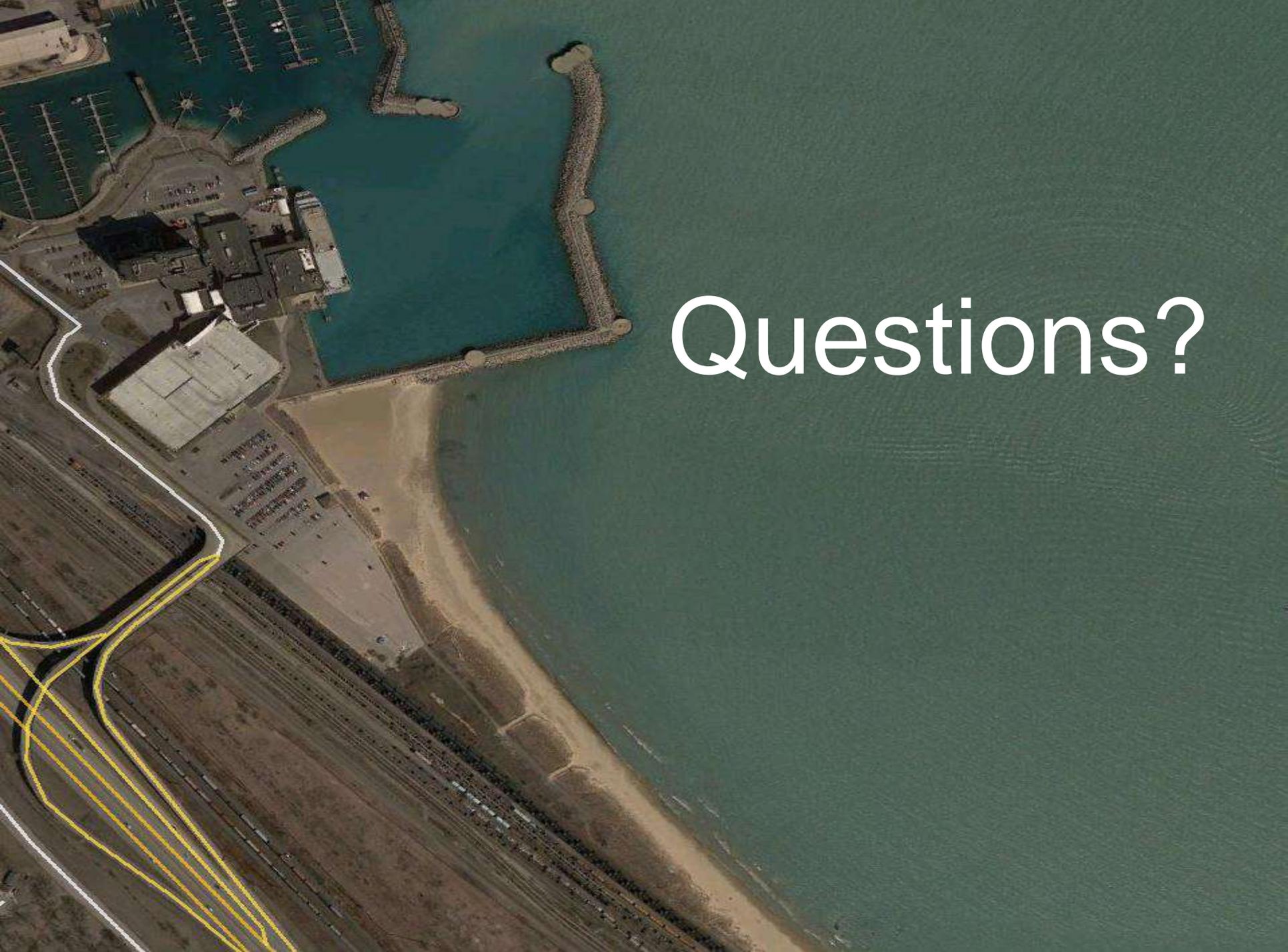
Structural Sustainability

1. Breakwater Void Fill and Rock Reefs
 - a. Cohesiveness and durability
 - b. Conformity
2. Plant Community Zones
 - a. Spatial coverage
 - b. Invasive species % coverage
 - c. Predator induced damages
 - d. Hydraulic induced damages
3. Human Interference & Damages
 - a. Physical damage
 - b. Removal
 - c. Rubbish and foreign debris

Biologic Response

1. Plant Communities
 - a. Formal line transect surveys
 - b. Floristic Quality Assessment
 - c. Accounts for both species richness and quality
2. Fish Communities
 - a. Boat mounted electrofishing
 - b. Beach seines w/ bag
 - c. Species richness assessment





Questions?